What is claimed is:

1. A method for generating an immune response to prostate-specific antigen (PSA) comprising, introducing a sufficient amount of a first pox virus vector to a host to stimulate an immune response, wherein the pox virus vector has at least one insertion site containing a DNA segment encoding PSA operably linked to a promoter capable of expression in the host.

2. The method of claim 1, further comprising at at least one periodic interval after introduction of the first pox virus vector contacting the host with additional PSA or a cytotoxic T-cell eliciting epitope thereof.

3. The method of claim 2, wherein the host is contacted with the additional PSA by introducing a second pox virus vector to the host having at least one insertion site containing a DNA segment encoding the PSA operably linked to a promoter capable of expression in the host.

4. A method for generating an immune response to prostate-specific antigen (PSA) in a host, comprising:

a. contacting the host with a sufficient amount of PSA or a cytotoxic T-cell eliciting epitope thereof; and

b. at least one periodic interval thereafter contacting the host with additional PSA or a cytotoxic T-cell eliciting epitope thereof.

5. The method of claim 4, wherein the host is contacted with the additional PSA by introducing a pox virus vector to the host having at least one insertion site containing a DNA segment encoding PSA or a cytotoxic T-cell eliciting epitope thereof operably linked to a promoter capable of expression in the host.

6. The method of claim 1 or 5, wherein the pox virus is selected from the group of pox viruses consisting of suipox, avipox, capripox and orthopox virus.

7. The method of claim 6, wherein the orthopox virus is vaccinia.

8. The method of claim 7, wherein the avipox is fowlpox, canary pox and pigeon pox.

9. The method of claim 8, wherein the suipox is swinepox.

10. The method of claim 3, wherein the first pox virus vector is vaccinia and the second pox virus vector is selected from the group of pox viruses consisting of suipox, avipox, capripox and orthopox virus.

11. The method of claim 2 or 4, wherein the PSA or T-cell eliciting epitope is formulated with an adjuvant or is in a liposomal formulation.

12. The method of claim 11, wherein the adjuvant is selected from the group consisting of RIBI Detox, QS21 and incomplete Freund's adjuvant.

13. A method for generating an immune response to PSA comprising contacting a host with a cytotoxic T-cell eliciting epitope of PSA.

14. The method of claim 13, wherein the T-cell eliciting epitope is formulated with an adjuvant or is in a liposomal formulation.

15. The method of claim 12, wherein the adjuvant is selected from the group consisting of RIBI Detox, QS21 and incomplete Freund's adjuvant.

16. A pharmaceutical composition comprising a pox virus vector having at least one insertion site containing a DNA reagent encoding PSA operably linked to a promoter and a pharmaceutical carrier.